

Effect of pyroligneous acid on growth, yield and quality improvement of rockmelon in soilless culture.

Abstract

Three fertilizer formulations namely; (M), a local formulation commonly used by farmers, the recommended Cooper standard (CS), and Benoit (BEN) suggested for the lower cost of production were evaluated in combination with four levels of pyroligneous acid (0, 10, 20 and 30%) for enhancement of growth, fruit yield and quality of rockmelon in soilless culture. The addition of 30% pyroligneous acid was toxic as most plants died at this concentration. Twenty percent (20%) pyroligneous acid increased the growth and yield of rockmelon plants, but the local formulation in combination with 10% pyroligneous acid gave the best results. This combination significantly improved plant growth, fruit weight, fruit diameter and sweetness of fruits. Hence the local formulation in combination with 10% of pyroligneous acid is recommended for good fruit yields in rockmelons.

Keyword: Fertilizer formulations; Growth; Pyroligneous acid; Quality; Rockmelon; Soilless culture; Yield.